AZD 980 735 7
Part A 2B

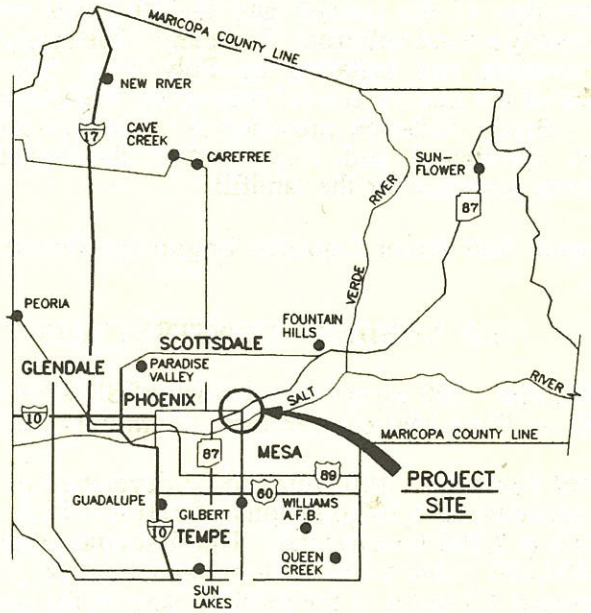
SALT RIVER PIMA-MARICOPA INDIAN COMMUNITY

9/95

OPEN OCTOBER 9, 1993

NEW SALT RIVER LANDFILL

13602 East Beeline Highway 87



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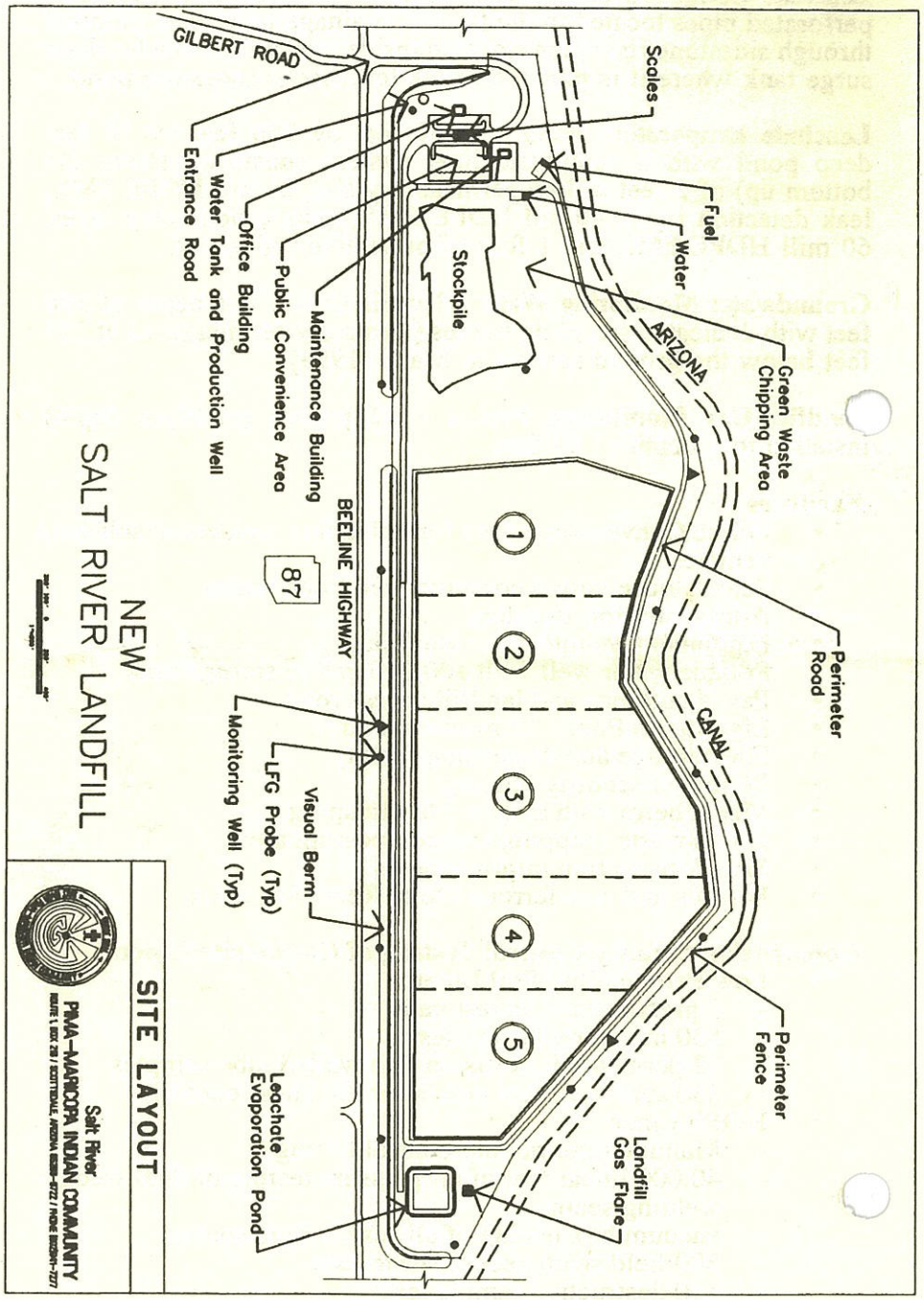


EW SALT RIVER LANDFILL

In early 1993, the Salt River Pima-Maricopa Indian Community of Arizona voted to relocate its municipal waste landfill. This decision included closure of the existing landfill by October 9, 1993. This 2,000 tons per day landfill plays an important role in the Community's economy by providing jobs and revenue for community services. The Community's decision to build a replacement landfill was based on a comprehensive landfill siting study along with the stipulation that the new Salt River Landfill must be environmentally sound, meet the new Federal Subtitle D Regulations, and be operational by October 9. The new landfill was funded solely by the Community.

Black & Veatch was selected to provide engineering services on the basis of a fast-track, design-build contract that would proceed from site assessment through design and construction in only eight months. The project provided the unique challenge associated wit an Indian Tribe's need to meet Subtitle D. The fast-track schedule required overlapping site assessment, engineering, design and construction for the initial waste cell, facilities and environmental protection systems.

Construction of the landfill and facilities was performed by the Community's Sand and Rock Company. The synthetic liner system was supplied and installed by Poly Flex, Inc. SHB AGRA performed the quality control testing for the low permeability soil layer. Brady Alderich provided the site surveying. Black & Veatch developed and implemented the construction quality assurance program for the landfill.

The new Salt River Landfill began operation on October 9, 1993.

NEW LANDFILL CONSTRUCTION FACTS

Landfill Site - 200 acres located north of SR 87 at Gilbert Road on Salt River Pima-Maricopa Indian Community property.

Landfill Footprint - 100 Acres to be developed in 5 phases with a total capacity of 4,700,000 tons of refuse which equates to a 10 year life at 2,000 tons per day. The first phase required excavation of 2,400,000 cubic yards of top soil / sand & gravel which was transported 4.5 miles to the existing landfill for cover and grading.

Landfill Liner - a composite liner system that meets the Federa Subtitle D Requirements consisting of a 2 feet thick low permeability (less than $1x10^{-7}$ cm/sec) soil layer, a 60 mil HDPE flexible membrane liner (FML), a drainage layer with a leachate collection system, and a 2 feet thick protective soil layer.

Leachate Collection & Removal System - leachate is collected in perforated pipes located in the landfill drainage layer then pumped through sideslope riser pipes located inside the landfill to a leachate surge tank where it is pumped to the leachate evaporation pond.

Leachate Evaporation Pond - a 250 feet by 250 feet by 10 feet deep pond with a composite liner system consisting (from the bottom up) of 2 feet of low permeability soil, 60 mil HDPE FML, leak detection layer, 40 mil HDPE FML, geosynthetic clay layer, 60 mill HDPE FML and 1 foot of protective soil cover.

Groundwater Monitoring Wells - 3 wells drilled to a depth of 390 feet with dedicated sampling pumps (groundwater measured at 225 feet below the ground surface in March 1993).

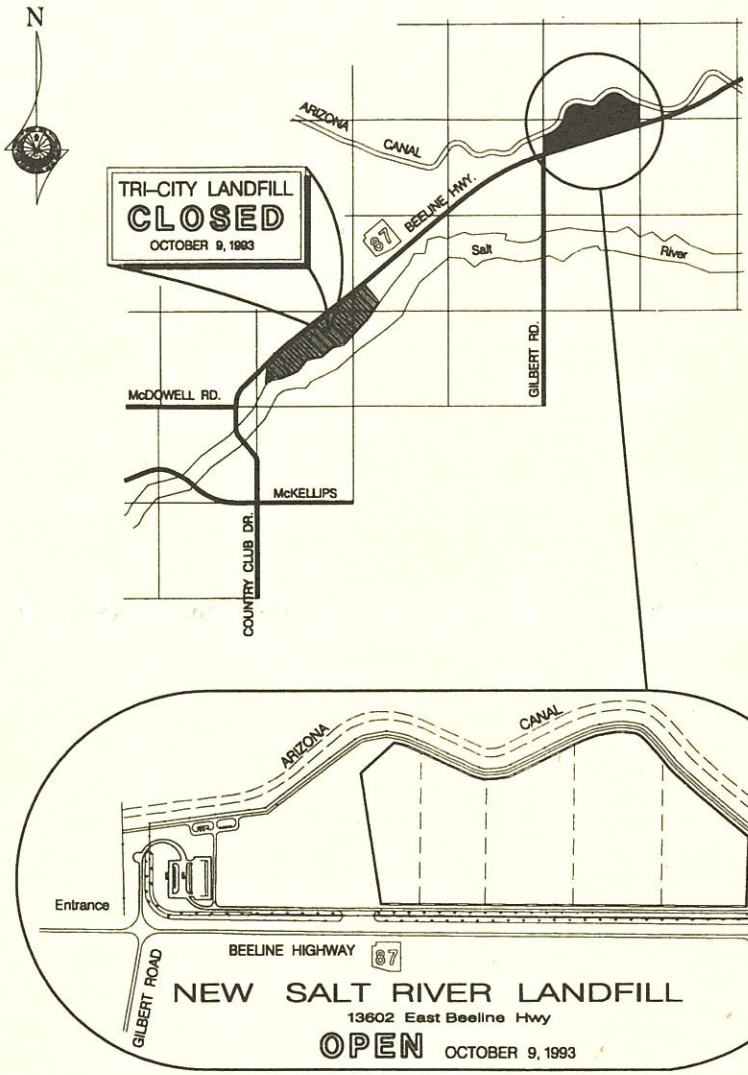
andfill Gas Monitoring Probes - 12 probes (multiple depth) installed to a depth of 80 feet.

Facilities

- Public Convenience Area for unloading residential self-haul vehicles
- Scale House with 3 computerized truck scales
- Administration Building
- Equipment Maintenance Building
- Potable water well with 100,000 gallon storage tank
- Paved entrance and landfill access road
- Lighting in Public Convenience Area
- Fuel storage and dispensing facility
- Perimeter security fencing
- Visual berm with irrigated landscaping
- Green waste chipping and composting area
- SR 87 inspection improvements
- Ferrous and non-ferrous Metal Recycling Area

Constrution Quality Control Testing of Composite Liner

- Low Permeability Soil Liner
  - 2 preconstruction test pads
  - 530 moisture/density tests
  - 82 permeability tests on thin walled tube samples
  - 350 surveyed data points for thickness control
- HDPE Liner
  - Manufacturer quality control testing
  - 40,000 linear feet of air pressure testing of dual wedge welding seams
  - vacuum box testing of all fusion weld seams
  - 300 field seam peel & shear tests
  - 150 destructive sample tests
  - third part laboratory seam peel, shear and material testing



New Location approximately
2 miles East
on Beeline Highway

LANDFILL VICINITY MAP

Salt River
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